Patricia Flores
01/24/02 09:01 AM

To: Bruce Rundell/R3/USEPA/US@EPA
cc:
Subject: Re: Air discharge levels from Berks Sand Pit.

45727?

Bruce,

I reviewed the projected air emissions from the groundwater treatment plant at the Berks Sandpit Site. The groundwater treatment plant air stripper and air pollution control system were described in the *December 28, 2001 letter from Gannett Fleming., Inc. to you.. The letter included a calculation of the* estimated uncontrolled release of 1,1,1-TCA and 1,1-DCE from the stack.

I performed a very conservative screening level analysis of the VOC concentrations that are expected 10 meters away from a 10 meter stack at what I assumed to be the nearest residential receptor. (If the stack is shorter than 10 meters, or the nearest resident is closer than 10 meters away, the analysis should be redone.) To do the analysis, the look-up table in the document, *A Tiered Modeling Approach for Assessing the Risks Due to Sources of Hazardous Air Pollutants,* EPA-450/4-92-001, was used. The look-up table was created to estimate conservative impacts of sources of toxic pollutants with a minimal amount of information concerning those sources. The normalized annual table was created based on conservative simulations of toxic pollutant sources with Gaussian plume dispersion models. In this context, "conservative" simulations use conservative assumptions regarding meteorology, building downwash, plume rise, etc.

The results of my analysis are listed below. The annual average ambient air concentrations were predicted for the offsite receptor located 10 meters away from the air stripper stack. The relevant Region 3 Risk Based Concentrations (RBC) from the May 2001 table are also listed as a comparison. While the predicted ambient air concentrations are below their respective RBC values, I recommend that you forward these predicted concentrations to the designated site toxicologist for his/her verification. (I'll bet that the low RBC for 1,1-DCE is the reason why controls were required for this air stripper.)

In my opinion, there is no reason why the controls can't be removed.

- Pat

Berks Sandpit Air Stripper Analysis

VOCs	Emissions (Tons/Year)	Annual Average Ambient *Air Concentrations (ug/m3)*	Region 3 RBC *Concentration (ug/m3)*
1,1,1-TCA	4.75E-3	1.3E-1	2.3E+3
1,1-DCE	6.00E-4	1.7E-2	3.6E-2

Bruce Rundell

Bruce Rundell
01/23/2002 02:27 PM

To: Patricia Flores/R3/USEPA/US@EPA
cc:
Subject: Air discharge levels from Berks Sand Pit.

Pat, A few weeks ago I asked you about removing gas phase carbon filter from the groundwater treatment system at the Berks Sand Pit. In brief in 2001 we captured 9.5 lbs/yr of TCA and 1.2 lbs/yr of DCE in the GAC. Needless to say we would like to disconnect the GAC and allow the TCA and DCE to discharge to the air. This would allow us to limit the use of the oil furnace to heating the building, saying money and oil heater exhaust.

Could you please take a look at the two attachments and let me know if our rational is valid.

Thanks


Carbrec.wp 
Compremoval2.